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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,134	02/16/2005	Adrianus Sempel	NL 020757	1961

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EXAMINER	
KARIMI, PEGEMAN	

ART UNIT	PAPER NUMBER
2629	

MAIL DATE	DELIVERY MODE
10/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/525,134	SEMPEL, ADRIANUS	
	Examiner	Art Unit	
	Pegeman Karimi	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *July/11/2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 July 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed on 07/11/2007 has been entered and considered by the examiner

Claim Objections

2. Claims 1-16 are objected to because of the following informalities: the use of parentheses in claims 1-4, 7, 10, 12, and 13 are improper since parentheses are used for the reference characters; see MPEP 608.01(M). Appropriate correction is required.

Specification

3. The new title of the invention is not descriptive enough. The title should mention a feedback circuit to control a reference voltage because it is directed to show the claimed invention. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-7 and 10-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Karube (U.S. Patent 6,456,282).

As to claims 1, Karube discloses a display device (1, 2, 3, and 4) comprising a number of picture elements (pixel array portion, 2) and a display driver device (3) comprising driving transistors (11) to be connected in series with the picture elements (circuit 11 is connected from one side to signal line drive circuit 3 and the other side to the pixel element.)

the display driver device (3) comprising means (12, control circuit) for monitoring output voltages of the display driver device (col. 5, lines 41-46, and col. 6, lines 51-59), the display driver device (3) comprising means (12) for detecting an open output (SW13 is off) of the display driver device to the picture elements (S), (col. 14, lines 54-61), (switch control circuit of data driver detects the writing period, switch 13 is off, and switches 10 and 12 are on so, it turns switch 13 on and switches 10 and 12 off).

As to claim 10, this claim differs from claim 1 only in that the limitation "the display driver device comprising a differential amplifier for detecting after the signaling an open output of the display driver device for a picture element." Is additionally recited. Karube teaches the display driver device (3) comprising a differential amplifier (OP1) for detecting after the signaling an open output (SW13 is open) of the display driver device for a picture element (S), (In sampling period switch control detects switches 10-13 and sets switch 13 to open and switch 12 to closed and the voltage of the input signal is fed

to OP1 and since the switch 13 is closed the output voltage is fed-back to the inverting input terminal), (col. 14, lines 44-47).

As to claims 2 and 11, Karube teaches the display device comprising means (12) for signaling (col. 6, lines 51-53) the value of an output voltage to reach a threshold voltage (Fig. 6, at sampling period the output voltage at node "f" = 5V, threshold = 5V, col. 6, line 42).

As to claims 3 and 12, Karube teaches the display device having fusing means (SW1 and SW2) between the driving transistors (INV1, INV2, and INV3) and the picture elements (2).

As to claims 4 and 13, Karube (Fig. 1) teaches the display device comprising a feedback mechanism (col. 8, lines 36-37) to control a reference voltage of the display driver device (col. 8, lines 36-42).

As to claims 5 and 14, Karube teaches the feedback mechanism further comprising a control circuit (10) signaling the difference between an output voltage of the display driver device (Fig. 6, Output voltage of node "f" = 3V) for a picture element and the reference voltage (Input Voltage at node "b" = 5.5V) being below a threshold voltage ($|3volts - 5.5volts| = 2.5volts$, 2.5 volts is below threshold voltage of "5 volts"), .

As to claim 6, Karube teaches the display driver device comprising means (SW7) for detecting an open output of the display driver device (col. 12, lines 42-54) to the picture elements (S) performing the detecting after the signaling (At the sampling

period because of power dissipation, load drive circuit detects switches 3-7 are on and switches 1-2 are off. It then enters writing and stable periods where it turns switches 3-7 off and switches 1-2 on and brings the voltage of node d lower).

As to claim 7, Karube teaches the display driver device comprising a differential amplifier (Fig. 11, OP1; col. 13, lines 63-65).

As to claim 15, Karube (Fig. 11) teaches the detecting (detecting by OP1), (voltage of node b to be set substantially equal to the voltage of Vin) an open output (signaling SW13 switch from off to on) of the display driver device (col. 14, lines 56-65) for a picture element (S) occurring after the signaling (voltage of signal S gets close to the video input Vin),(col. 15, lines 8-15).

As to claim 16, Karube (Fig. 11) teaches a display driver comprising a switch in the current path (SW13) between the reference voltage (node "a") and the output of the display driver device (node "c").

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karube (U.S. Patent 6,456,282) in view of Miyazawa (Pub. No. 2003/0160247).

As to claim 9, Karube does not teach the luminescent element. Miyazawa (Fig. 1) teaches the picture element being a luminescent element (3) and the first current determining the luminescence of the luminescent element ([0038], lines 9-17) Therefore it would have been obvious to one having ordinary skill in the art, at the time the invention was made, to have used the luminescent element of Miyazawa in Karube's display device because electroluminescent elements can operate at low voltage and have an angle-dependent visibility lower than that of liquid crystal elements ([0015]).

As to claim 8, Karube teaches the feedback mechanism keeping the difference between an output voltage of the display driver device (Fig. 6, Output voltage of node "d" = 3V) for a picture element and the reference voltage (Input Voltage at node "b" = 5.5V) substantially constant (col. 7, lines 35-40).

Miyazawa teaches the picture elements (23) being driven by current sources ([0038, lines 9-15). Thus combining Karube and Miyazawa meet the claimed limitations.

Response to Arguments

8. Applicant's arguments filed on July/11/2007 have been fully considered but they are not persuasive.

Applicant argues that Karube does not teach or describe among other features, the display driver device comprising means for detecting an open output of the display driver device to the picture elements. Karube teaches the display driver device (3) comprising means (12) for detecting an open output (SW13 is off) of the display driver

device to the picture elements (S), (col. 14, lines 54-61), (switch control circuit of data driver detects the writing period, switch 13 is off, and switches 10 and 12 are on so, it turns switch 13 on and switches 10 and 12 off).

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Inquires

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pegeman Karimi whose telephone number is (571) 270-1712. The examiner can normally be reached on Monday-Thursday 8:00am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh Nguyen can be reached on (571) 272-7772. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Pegeman Karimi
09/19/2007

CHANH D. NGUYEN
SUPERVISORY PATENT EXAMINER